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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,661	12/29/2003	In-Ho Lee	51330/DBP/Y35	1570
23363	7590	03/27/2006	EXAMINER	
CHRISTIE, PARKER & HALE, LLP PO BOX 7068 PASADENA, CA 91109-7068			PENG, KUO LIANG	
			ART UNIT	PAPER NUMBER
			1712	
DATE MAILED: 03/27/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/747,661	Applicant(s) LEE ET AL.	
	Examiner Kuo-Liang Peng	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/3/06 Response.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 10-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 7-8 is/are rejected.
- 7) ☒ Claim(s) 3-6, 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/29/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/19/04, 12/29/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election of the invention of Group I (Claims 1-9) in the response to restriction requirement filed on February 3, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The requirement is still deemed proper and is therefore made FINAL.

Groups II-III, Claims 10-32 are withdrawn for further consideration.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 7-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 7, “i” and “j” in compounds (2b) and (2c) are not defined.

In Claim 7, it is not clear as to what are the counter-anions of the compounds because these compounds should have the charges balanced

In Claim 8, it is not clear as to what are the counter-anions of the compounds (2a') to (2c') because these compounds should have the charges balanced.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schutyser (US 5 153 024) as evidenced by Jackson (US 4 701 351).

Schutyser discloses a substrate construction that comprises a substrate, an organic polymer linker material and a noble metal thin layer. The organic polymer linker material can be polyimines, such as polyethylene imine. (col. 1, line 63 to col. 2, line 53 and Examples) Schutyser further teaches that the noble metal can be the ones taught in Jackson. (col. 4, lines 20-24) Thus, Jackson teaches the use of a noble metal of gold. (col. 1, lines 19-59) Since Schutyser's polyimine reads on Applicants' organic polymer linker material, both materials should possess the

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same properties including the X-ray diffractometric characteristics. Schutyser is silent on the thickness of the organic polymer linker layer. However, it is well known in the adhesion art that the thickness of the organic polymer linker material layer can affect the strength of the adhesion between two layers to be bonded by the organic polymer linker material layer. For example, if the organic polymer linker material layer is too thick, then during adhesion test, a cohesive failure mode (i.e., a fracture happens in the bulk of the organic polymer linker material layer) will occur, which results in poor adhesion. Therefore, the thickness is typically adjusted so that during adhesion test, an adhesive failure mode occurs, i.e., the fracture happens at the interface between the substrates and the organic polymer linker material layer. The latter will result in strong adhesion. In other words, the thickness is a Result-Effective variable. Therefore, it would have been obvious to one of ordinary skilled in the art at the time of the invention was made to apply an organic polymer linker material layer with whatever thickness through routine experimentation in order to obtain a desired adhesion. Especially, Applicants do not show the criticality of the thickness. See MPEP 2144.05 (II). The preamble “for immobilizing a physiological material” is merely an intended use, and does not carry any weight of patentability. See MPEP 2111.02.

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6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schutyser as evidenced by Jackson as applied to Claims 1 and 12 above, and further in view of Yamaguchi (US 4 569 885) or Cohen (US 5 972 484).

Schutyser as evidenced by Jackson is silent on the specific substrate set forth in the instant claim. However, Schutyser further teaches the use of plastics substrates for use in printed circuit board. (col. 2, lines 24-27) Furthermore, Yamaguchi teaches the use of polyester for preparing the printed circuit board. (col. 2, lines 6-24) Cohen teaches the use of polyethylene for preparing the printed board. (col. 2, lines 13-17) The motivation of using the polyester or polyethylene is to afford a proper printed circuit board. Therefore, it would have been obvious to one of ordinary skilled in the art at the time of the invention was made to utilize the polyester or polyethylene as the material for preparing Schutyser's printed circuit board.

7. Claims 3-6 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

None of the above references, taken alone or in combination, teaches or fairly suggest the substrate construction set forth in the instant claims.

8. Claims 7-8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The patentability of the instant claims is described in the previous paragraph.

9. The four references cited in "OTHER DOCUMENTS" of the information disclosure statement filed on December 29, 2003 have been lined through because Applicants do not provide copies thereof.

10. The "X" references cited in the British patent search report are not relied upon because of the following reason:

All of the X references except EP 430 333 does not teaches or fairly suggest the substrate construction having the organic polymer linker material layer having the specific characteristics set forth in the present invention.

US 5 153 024, the US equivalent of EP 430 333, has been applied.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is


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(571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

klp
March 17, 2006


Kuo-Liang Peng
Primary Examiner
Art Unit 1712